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10/526,169

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Chin Shyan Raymond Ooi

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BLAKELY SOKOLOFF TAYLOR & ZAFMAN LLP  
1279 OAKMEAD PARKWAY  
SUNNYVALE, CA 94085-4040

EXAMINER

SU, SARAH

ART UNIT

PAPER NUMBER

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/526,169	<b>Applicant(s)</b> OOI ET AL.	
	<b>Examiner</b> Sarah Su	<b>Art Unit</b> 2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☒ Claim(s) 1-30 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/24/05, 6/23/05, 11/17/05, 1/17/06, 8/25/06, 2/5/08</u> .    | 6) <input type="checkbox"/> Other: _____                          |



### **DETAILED ACTION**

1. Preliminary Amendment received on 24 February 2005, has been entered into record. In this amendment, claims 4, 8-11, 14-16, 22-23 and 27-30 have been amended.
2. Claims 1-30 are presented for examination.

### ***Priority***

3. The claim for priority from PCT/SG04/00109 filed on 26 April 2004 is duly noted.

### ***Specification***

4. The abstract of the disclosure is objected to because "[Fig. 1]" in line 11 should be removed. Correction is required. See MPEP § 608.01(b).
5. The disclosure is objected to because of the following informalities:
  - a. in page 1, line 8: "there have been" should read –there has been–;
  - b. in page 2, line 11: "so that it can a user" should read –so that a user–;
  - c. in page 5, line 7: "preferably include" should read –preferably includes–.Appropriate correction is required.

### ***Claim Objections***

6. Claims 17 and 18 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot refer to two sets of claims to different

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features. See MPEP § 608.01(n). Accordingly, the claims 17 and 18 not been further treated on the merits.

7. Claim 16 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 16 recites a combination of a portable data storage device according to claim 1, which does not properly further limit claim 1.

8. Claims 1-30 are objected to because of the following informalities:

- a. In claim 1, lines 3, 4 and 8: "data" is unclear if it relates to "data" (claim 1, line 2);
- b. In claim 1, line 7: "a host" is unclear if it relates to "a host" (claim 1, line 3);
- c. In claim 1, line 9: "a key" is unclear if it relates to "at least one key" (claim 1, line 6);
- d. In claims 2-15, line 1: "A device" is unclear if it relates to "A portable data storage device" (claim 1, line 1);
- e. In claim 10, line 2: "data" is unclear if it relates to "data" (claim 1, line 3);
- f. In claim 11, line 2: "include a" should read –includes a–;
- g. In claim 13, line 2: "a host" is unclear if it relates to "a host" (claim 1, line 3);
- h. In claim 15, line 4: "audio data" is unclear if it relates to "audio data" (claim 15, line 3);

- i. In claim 16, line 1: “a portable data storage device” is unclear if it relates to “A portable data storage device” (claim 1, line 1);
- j. In claim 16, line 3: “data” is unclear if it relates to “data” (claim 1, line 3);
- k. In claim 17, lines 2-3: “the private key” lacks antecedent basis;
- l. In claims 17 and 18, line 1: “A combination” is unclear if it relates to “combination” (claim 16, line 1);
- m. In claim 19, line 3: “a host” is unclear if it relates to “a host” (claim 19, line 2);
- n. In claim 19, line 3: “data” is unclear if it relates to “data” (claim 19, line 1);
- o. In claims 20-30, line 1: “A method” is unclear if it relates to “A method” (claim 19, line 1);
- p. In claim 21, lines 1-2: “a digital signature” is unclear if it relates to “a digital signature” (claim 20, line 4);
- q. In claim 23, line 2: “the private key” lacks antecedent basis;
- r. In claim 29, line 2: “the user’s identity” lacks antecedent basis;
- s. In claim 29, line 3: “the biometric sensor” lacks antecedent basis;
- t. In claim 29, line 4: “data” is unclear if it relates to “data” (claim 19, line 1);
- u. In claim 30, line 3: “data” is unclear if it relates to “data” (claim 19, line 1);
- v. In claim 30, line 5: “host regenerating” should read –host, regenerating–.

Appropriate correction is required.

***Drawings***

9. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 13 (page 8, line 1).
10. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference characters "5" and "7" have both been used to designate "biometric sensor" (page 7, line 26; page 9, lines 8 and 10-11).
11. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "Step 4" has been used to designate both "SEND REQUESTED DATA A" (Figure 2) and "SEND A,Z AND DIGITAL SIGNATURE TO HOST" (Figure 3).
12. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "Step 5" has been used to designate both "DECODE K" (Figure 2) and "USE Z AND A TO VERIFY DIGITAL SIGNATURE" (Figure 3).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for

consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

13. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

14. Claims 16-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 16 recites "In combination" in line 1 and claims 17 and 18 recite "A combination" in line 1. These limitations are ambiguous and thus unclear as to what the applicant considers as the "combination" and how it further limits the device of claims 1, 2 and 6.

***Claim Rejections - 35 USC § 102***

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.



16. Claims 1, 4-7, 9, 15-16, 19, 23-27 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Brandys (WO 02/073877 A2).

As to claims 1 and 19, Brandys discloses a system and method for authenticating users and data, the system and method having:

**a non-volatile memory for storing user data** (page 7, lines 8-12),  
**an interface section for receiving data from and transmitting data to a host** (page 4, lines 3-4),  
**a master control unit for transferring data to and from the non-volatile memory** (page 4, lines 2-3; page 10, lines 25-26),  
**integrated circuit means for generating at least one key** (page 4, lines 1-2),  
**the device being arranged, upon receiving a command from a host requesting data, to transmit the requested data stored in its memory to the host using the interface section, and to transmit a key generated by the integrated circuit means to the host using the interface section** (page 4, lines 3-4).

As to claims 4 and 23, Brandys discloses:

**the generated key is the private key of a public key/private key pair** (page 4, lines 1-3).

As to claims 5 and 24, Brandys discloses:

**the verification of the digital signature is performed in the device using the public key** (page 5, line 35).

As to claims 6 and 25, Brandys discloses:

**the integrated circuit means is arranged to generate the generated key as one of a public key and a private key, the device being further arranged to generate a digital signature using the requested data and the private key, and transmits the digital signature and the public key out of the device** (page 4, lines 1-3, 19-23).

As to claims 7 and 27, Brandys discloses:

**the requested data includes both data present in the memory, and also biometric data obtained from a biometric sensor of the device** (page 2, lines 24-26).

As to claims 9 and 29, Brandys discloses:

**a biometric sensor and verification engine for granting access to data stored in the device based on a biometric verification of the user's identity by comparison of biometric data received using the biometric sensor with pre-stored biometric data** (page 2, lines 24-26).

As to claim 15, Brandys discloses:

**a camera for generating image data, and/or a microphone for capturing audio data** (page 7, lines 19-20), **the master control unit being arranged to store the image data and/or audio data in the memory** (page 7, lines 8-12).

As to claim 16, Brandys discloses:

**the host computer being arranged to transmit a command (i.e. message) to the device using the interface section to request data** (page 4, lines 17-18).

As to claim 26, Brandys discloses:

**the host using the public key to verify that the requested data it receives is the same data which the device used to generate the digital signature** (page 5, line 35).

### ***Claim Rejections - 35 USC § 103***

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

19. Claims 2-3, 8, 11-13, 20-22 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandys as applied to claims 1 and 19 above, and in view of Buch et al. (US 2003/0217165 A1 and Buch hereinafter).

As to claims 2 and 20, Brandys does not disclose:

**generated key is transmitted in a form encrypted using a secret key which is permanently stored in the portable storage device, the portable storage device further being arranged to verify a digital signature generated by the host using the generated key and the requested data.**

Nonetheless, this feature is well known in the art and would have been an obvious modification of the teachings disclosed by Brandys, as evidenced by Buch.

Buch discloses a system and method for end-to-end authentication of session initiation protocol messages using certificates, the system and method having:

**generated key is transmitted in a form encrypted using a secret key which is permanently stored in the portable storage device (0027, lines 2-3, 18-20; 0033, lines 10-12), the portable storage device further being arranged to verify a digital signature generated by the host using the generated key and the requested data (0028, lines 5-8).**

Given the teaching of Buch, a person having ordinary skill in the art at the time of the invention would have readily recognized the desirability and advantages of modifying the teachings of Brandys with the teachings of Buch by creating a key in order to verify a digital signature. Buch recites motivation by disclosing that verifying a signature can be used to authenticate a sender and confirm the integrity of a message (0005, lines 10-

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16). It is obvious that the teachings of Brandys would have benefited from the teachings of Buch by providing a key with which to verify a digital signature in order to authenticate a sender and verify the integrity of a message.

As to claim 21, Brandys discloses:

**wherein the host generates a digital signature using the private key and the requested data** (page 4, lines 19-23).

As to claims 3 and 22, Brandys discloses:

**the digital signature is produced by hashing the received data to generate a hash result, and encrypting the hash result using the generated key** (page 4, lines 19-23).

As to claims 8 and 28, Brandys does not disclose:

**arranged to transmit the requested data in an encrypted form.**

Nonetheless, this feature is well known in the art and would have been an obvious modification of the teachings disclosed by Brandys, as evidenced by Buch.

Buch discloses:

**arranged to transmit the requested data in an encrypted form** (0027, lines 14-15).

Given the teaching of Buch, a person having ordinary skill in the art at the time of the invention would have readily recognized the desirability and advantages of modifying

the teachings of Brandys with the teachings of Buch by transmitting encrypted data. Buch recites motivation by disclosing that if a message is encrypted, a private key is needed in order to decrypt the message (0028, lines 13-16), providing message security. It is obvious that the teachings of Buch would have improved the teachings of Brandys by transmitting encrypted data so that only a private key can be used to acquire the original message, thus providing message security during transmission.

As to claim 11, Brandys does not disclose:

**the interface section include a USB connector and a USB interface device.**

Nonetheless, this feature is well known in the art and would have been an obvious modification of the teachings disclosed by Brandys, as evidenced by Buch.

Buch discloses:

**the interface section include a USB connector and a USB interface device** (0019, lines 11-13)

Given the teaching of Buch, a person having ordinary skill in the art at the time of the invention would have readily recognized the desirability and advantages of modifying the teachings of Brandys with the teachings of Buch by allowing connectively through USB. Buch recites motivation by disclosing that various interfaces may be used (0019, lines 11-14). It is obvious that the teachings of Buch would have improved the teachings of Brandys by providing for an interface using USB because various interfaces may be used to connect to the system bus.

As to claim 12, Brandys does not disclose:

**the connector is a USB plug integral with the memory device.**

Nonetheless, this feature is well known in the art and would have been an obvious modification of the teachings disclosed by Brandys, as evidenced by Buch.

Buch discloses:

**the connector is a USB plug integral with the memory device** (0018, lines 8-17).

Given the teaching of Buch, a person having ordinary skill in the art at the time of the invention would have readily recognized the desirability and advantages of modifying the teachings of Brandys with the teachings of Buch by providing for a USB connection for the device. Please refer to the motivation recited above in respect to claim 11 as to why it is obvious to apply the teachings of Buch to the teachings of Brandys.

As to claim 13, Brandys discloses:

**the interface section is for wireless communication with a host** (page 3, lines 11-12).

20. Claims 10 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brandys as applied to claims 1 and 19 above, and further in view of Iwagaki et al. (US 2003/0161468 A1 and Iwagaki hereinafter).

As to claims 10 and 30, Brandys does not disclose:

**a compression algorithm for exploiting any redundancy in data received by the device to compress it before storing it in the non-volatile memory, and a decompression engine to regenerate the data before it is transmitted from the device.**

Nonetheless, this feature is well known in the art and would have been an obvious modification of the teachings disclosed by Brandys, as evidenced by Iwagaki.

Iwagaki discloses a system and method for securing a storage device, the system and method having:

**a compression algorithm for exploiting any redundancy in data received by the device to compress it before storing it in the non-volatile memory, and a decompression engine to regenerate the data before it is transmitted from the device (0009, lines 13-17).**

Given the teaching of Iwagaki, a person having ordinary skill in the art at the time of the invention would have readily recognized the desirability and advantages of modifying the teachings of Brandys with the teachings of Iwagaki by providing for compression and decompression of stored data. Iwagaki recites motivation by disclosing that data can be very large and storing uncompressed data in a storage device does not effectively utilize the storage capacity of the device (0009, lines 9-12). It is obvious that the teachings of Iwagaki would have improved the teachings of Brandys by allowing for the compression and decompression of stored data in order to use the storage capacity of the device more effectively.



21. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brandys as applied to claim 1 above, and further in view of Fang (US Patent 6,536,941 B1).

As to claim 14, Brandys does not disclose:

**a housing including a narrowed end for use as a pointer.**

Nonetheless, this feature is well known in the art and would have been an obvious modification of the teachings disclosed by Brandys, as evidenced by Fang.

Fang discloses a wrist-worn personal flash disk apparatus, the apparatus having:

**a housing including a narrowed end for use as a pointer** (33, Figure 1).

Given the teaching of Fang, a person having ordinary skill in the art at the time of the invention would have readily recognized the desirability and advantages of modifying the teachings of Brandys with the teachings of Fang by providing for a housing with a narrowed end. Fang recites motivation by disclosing that the storage device can have multiple functions depending on the physical shape of the device (Abstract, lines 1-14).

It is obvious that the teachings of Fang would have improved the teachings of Brandys by providing for a specific shaped housing, such as a narrowed end, in order to allow for multiple functions of the device.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Su whose telephone number is (571) 270-3835.

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The examiner can normally be reached on Monday through Friday 7:30AM-5:00PM EST..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Sarah Su/  
Examiner, Art Unit 2131

/Christopher A. Revak/  
Primary Examiner, Art Unit 2131